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Turina et al.

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(54) **METHOD FOR VARIABLE BLOCK SCHEDULING INDICATION BY AN UPLINK STATE FLAG IN A PACKET DATA COMMUNICATION SYSTEM**

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(57) **ABSTRACT**

A packet data communication system uses an USF (Uplink State Flag) transmitted on the downlink and interleaved with downlink data, to schedule traffic on the uplink for one or several mobile users utilizing the same physical channel. The USF indication is made variable and defined in the control signaling at setup of a packet transmission. An USF indicates to a mobile that one or several consecutive radio blocks is reserved for uplink transmission from a specific mobile. The mobile does not have to receive the USF during the remaining period defined by the number of radio blocks scheduled. The solution is especially advantageous in combination with adaptive antennas when all radio blocks on the downlink transmissions do not have to be broadcast to all users on a certain channel.

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(52) **U.S. Cl.** 370/337; 370/347

(58) **Field of Search** 370/351, 352, 370/389, 398, 399, 401, 402, 403, 336, 337, 493, 528, 345, 347, 465, 494, 332, 441, 442, 346, 341, 338, 334, 329, 326, 321, 314, 522, 524, 480; 455/422, 466, 332, 522, 456, 457, 524, 428, 437, 452, 455, 15, 509, 516, 517

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23 Claims, 6 Drawing Sheets

